[redacted]

Standard Operating Procedure

Title: [redacted]

[redacted]

1. Objective

This document describes a method for determining [redacted] concentrations using a [redacted]

2. Scope

This method is applicable to fermentation samples [redacted]

3. Referenced Documents

4. Safety

Some materials used in this procedure are considered to be hazardous. Consult appropriate material safety data sheets (MSDS) for safe chemical handling. Always wear a laboratory coat, safety goggles, and gloves when performing the procedure.

5. Equipment and Materials

5.1 [redacted]

5.2 Microfuge

5.3 [redacted] Microfuge tubes

5.4 [redacted] filters (or equivalent)

5.5 [redacted] disposable syringes (or equivalent)

6. Procedure

6.1 Assure the buffer bottle (right side) has greater than 1" buffer in the bottle.

6.2 Assure the waste bottle (left side) has greater than 1" fluid space remaining.

6.3 Set [redacted] to [redacted] mode.

6.3.1 If the [redacted] is in the [redacted] mode, press the buttons [redacted] Repeat this process until the machine is able to calibrate and indicate

[redacted] If the machine is unable to calibrate, contact your supervisor.

Note: If the [redacted] is equipped with an [redacted], sampling will be performed at Station [redacted]. Refer to the [redacted] manual for [redacted] configuration instructions.

7. Preparing cell-free supernatant samples

7.1 Transfer [redacted] of fermentation broth to a [redacted] microfuge tube(s).

Note: For high cell density [redacted] multiple [redacted] cryovials will be required to yield [redacted] supernatant for analysis and retain.

7.2 Centrifuge the broth in a microfuge at [redacted] minutes.

7.3 Pour off the supernatant(s) into a clean, [redacted] cryovial or microfuge tube. A [redacted] supernatant sample is sufficient for analysis and retain.

7.4 If the supernatant is turbid or has visible particulates, filter the supernatant through a [redacted] syringe filter into a new 2 mL cryovial or microfuge tube.

7.5 If using a [redacted], supernatant containing cryovials / microfuge tubes are placed directly in the [redacted] starting with position [redacted]. Caps are open and face the center of the [redacted]

8. Analyzing samples manually at Station [redacted]

8.1 Assure the [redacted] indicates [redacted]

8.2 Press the sample button and wait for the [redacted] to move to [redacted]

8.3 When the LED indicates [redacted] manually submerge the [redacted] into cell free supernatant while holding the cryovial or microfuge tube. Then push [redacted]

8.4 Results will be reported on the LED and printed out. Record the results on the appropriate Run Sheet, Pilot Fermentation Record, notebook, or equivalent.

8.5 If total, combined [redacted], then results for [redacted] samples are invalid.

8.5.1 In this case, prepare a dilution consisting of 1 [redacted] Mix thoroughly and reanalyze. Multiply [redacted] when

reporting on the appropriate Run Sheet, Pilot Fermentation Record, notebook or equivalent.

9. Analyzing samples with a[redacted]

9.1 Enter the [redacted] by pressing the buttons [redacted]

9.2 Input the [redacted] by pressing the buttons [redacted]

9.3 Input the number of samples to be processed and press [redacted]

9.4 Assure [redacted]

9.5 Exit the menu by pressing [redacted]

9.6 Press the [redacted] button to start measurements.

9.7 Ensure the [redacted] samples each tube.